

MANUFACTURING EXTENSION PARTNERSHIP

Success Stories from the Field

Jor-Mac Co. Inc.

Wisconsin Manufacturing Extension Partnership

Jor-Mac's Journey Reclaims Work from China

Client Profile:

Jor-Mac Co., is a metal fabricator located in Grafton, Wisconsin. The firm has about 85 employees. The industries Jor-Mac serves include OEMs, defense, construction, transportation, medical, foodservice and HVAC. About 60 percent of Jor-Mac's customers are Fortune 1000 companies.

Situation:

When it first happened 10 months ago, Paul Lubber, CEO of Jor-Mac Co., thought it was some kind of glitch. A job came into the metal fabrication company and the prints were in Chinese. But then it happened again. "We've had several situations where we're getting prints in that are all in Chinese," said Lubber. It became apparent that OEMs who had outsourced work to China were bringing it home. It was no accident that the jobs landed at Jor-Mac's door. When the Grafton-based company was purchased in 2000, the firm had a good reputation that dated back to the 1950s. But the business was waiting for orders to come in, rather than pursuing them. It was time for a new direction for the current business climate. The new plan was to position Jor-Mac as a metal fabrication contractor, to "build a highly competent organization that could link up with leading OEMs that have a strategic plan to outsource their metal fabrication needs," explained Lubber. For help with this plan, they turned to the Wisconsin Manufacturing Extension Partnership (WMEP), a NIST MEP network affiliate, which started Jor-Mac on the journey into Lean Manufacturing. Lean Manufacturing streamlines a company's business processes and reduces waste to make the business as efficient as possible.

Solution:

The first step was a Value Stream Mapping (VSM), a Lean tool that helps reveal where waste is occurring. With VSM, a company's business processes are detailed and a visual representation is created to illustrate material and information flows. Seeing the processes drawn on a large sheet of paper, as Jor-Mac employees did, is usually an eye-opening experience. Jor-Mac started with an Office VSM of its front end, including quote and order processing, inside sales, engineering and procurement. They mapped out the exact flow of the activities, including whose desks paperwork sat on, how long it took to be processed, and the amount of time between each step. They then brainstormed ways to cut the time spent on the paperwork and the distance it traveled. They ended up making many small changes, including combining all the order-related information in one place and eliminating the need to have two people review incoming orders. Lubber said the changes resulted in about a 70 percent reduction in time spent on inside order processing. Previously it might take up to two weeks, but was reduced to one to two days. "Beyond showing where waste is occurring, VSM is a great communication tool," said Phil Skowbo, WMEP manufacturing specialist who worked with Jor-Mac. "When we did this, it became very obvious within the culture at Jor-Mac that Paul's sense of urgency was well-founded." When a VSM is created, "everyone is part of the process and part of the solution," Lubber said. "It's a wonderful team-building, organization-developing activity." In addition to

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streamlining the front end, they developed best practices and implemented a 5S Visual Workplace, which creates clean, well-organized workspaces for employees. Set-Up Reduction was used to decrease set-up times and increase production time on equipment.

The next step for Jor-Mac was participation in the OEM-Supplier Development Consortium. This innovative supplier development program, using Value Chain Management (VCM), gives OEMs the chance to provide key suppliers with assistance in Lean methods. This creates a more local supply chain for the OEM that offers flexibility and rapid response. When an OEM identified Jor-Mac as a key vendor and wanted the company to participate in the program, "it was a great vote of confidence," said Luber. "It fit into our whole business strategy." Value Chain Management (VCM) helps improve a supply chain by eliminating non-value-added supplier activities. VCM "drives waste out of the supply chain," said Skowbo, reducing costs for OEMs and end users.

One of the key goals of VCM is to reduce Manufacturing Critical Path Time (MCT), the time from the moment an order is received until the first product is received by the customer. In Jor-Mac's case, this meant the creation of another value stream map, tracking the processes related to one of the OEM's products. They identified an opportunity to improve throughput by almost 50 percent. The work to capture the improvement is taking place now, and a reduction in changeover has already been realized. In conjunction with a major capital program, changeover has been reduced from one to two hours down to 5 to 10 minutes.

And Jor-Mac is working with its own suppliers on VCM. This includes reducing its supplier base so there are fewer relationships to manage. With current suppliers, Jor-Mac has reviewed the quote and order process, created target delivery times and established optimal quantities. The hope is to develop "tighter, more integrated relationships," said Luber, that are "optimized for mutual gain." Jor-Mac, which has been certified an ISO 9001:2000 manufacturer, has also positioned itself strategically in the marketplace, broadening its customer base so that no industry exceeds 20 percent of its base. Getting work back from China is certainly confirmation that Jor-Mac is headed in the right direction. But for certain kinds of work, it's clear that speed of delivery and flexibility are competitive advantages for local companies that can't be matched by overseas manufacturers. The use of Lean methods as a strategy for improvement can help Wisconsin manufacturers be responsive in ways that provide a strong competitive advantage. "The real answer lies in mutually working together to lead to the most optimized results", said Luber. Using Lean and Value Chain Management is a situation where "everyone's interests are aligned to a common goal of getting better. Everyone wins", he said. And when working to make improvements, "clearly the process never ends", said Luber. "We're not done. It's an on-going process of continuous improvement." Jor-Mac's improvements have been effective because "Paul had a plan for improvement, and provided the necessary resources to move the plan forward," said Skowbo. "Thinking strategically is critical."

Results:

- * Increase in inventory turns from 6 to 10 plus.
- * Reduction in WIP, down 40 percent.
- * Reduction in MCT, down 35 percent.
- * Reduction in finished goods inventory by 10 percent .

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- * Increased sales of \$5 million.
- * Retained sales of \$8 million.
- * Estimated cost savings of approximately \$500,000.

Testimonial:

"I can't say enough good about WMEP. You say, this is what we want to accomplish; their sole focus is to achieve the goal. WMEP is results-driven. You feel like they're truly interested in your business."

Paul Lubert, President